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LEUCOPLAKIA BUCCALIS AND ORAL EPITHELIAL NAEVI. A CLINICAL AND HISTOLOGICAL STUDY.*

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Schwimmer in 1877 described leucoplakia under its present name and definitely distinguished it from psoriasis. Butlin (1885), in his wonderful monograph *The Diseases of the Tongue*, adopted the term leukoma and referred to a case-report by Sir James Paget (1851) of a smoker's patch on the tongue. According to Prinz and Greenbaum (1939), Besnier and Doyon in 1891, in a translation of the *Atlas of Diseases of the Skin* by Kaposi, describe this lesion in its advanced form as leucokeratosis, a most satisfactory descriptive title which unfortunately was not generally adopted.

Leucoplakia is the most generally used term, but being purely descriptive has been used to describe abnormalities of keratinization of the oral mucosa resulting from friction, smoking and syphilis and has no doubt also included developmental anomalies that will be described under epithelial naevi in this paper. There is very little correlation in the literature between the various clinical pictures and their corresponding histopathology. This is often so of diseases whose natural history takes so many years to unfold and if they occur in sites where biopsy specimens are difficult to obtain. The latter are not easy to obtain in the mouth, but a technique will be described which is suitable for the oral mucosa and with which all the pathological material in this series of cases was obtained under local anaesthesia.

In 1925 Fox wrote this opening sentence to his paper analysing 40 cases of leucoplakia buccalis : " While much has been written on leucoplakia buccalis, there is still some difference of opinion regarding certain of its features." These differences of opinion may be more relative than real, for nobody has yet

* Dr. Cooke was awarded The Chesterfield Medal for 1955 for this paper.

defined leucoplakia satisfactorily and different observers were no doubt describing widely different lesions. It is the purpose of this paper to describe some of the clinical and histological features of what might well be called different clinical entities but have up to now been grouped together under the title leucoplakia.

Cade (1949) defined leucoplakia as " a chronic process affecting the mucous membranes of the mouth and tongue, characterized by the development of irregular pearly white patches of keratinized epithelium ultimately tending to undergo malignant change." Similar statements appear throughout the literature, and all white patches, whether they form on the cheeks, palate or tongue, whether surrounded by an erythematous mucosa or not, whether the aggravating factor is smoking or biting the cheeks, are grouped together and given the same symptoms, histopathology and prognosis.

White patches are, of course, found in the mouths of non-luetic, non-smokers, teetotallers, edentulous and dentally fit mouths. Thus it seems that secondary factors such as smoking and friction influence the prevalence or the degree of the condition but are not always actually responsible for it. They tend to precipitate the development of leucoplakia in susceptible patients where the constitutional tendency is present. What this constitutional factor is is still open to speculation, but it may be a developmental anomaly in the epithelium that gives it this low threshold to keratinization.

The term keratosis is preferred to leucoplakia, for unnecessary mental distress may be given to a patient if he finds in a book or a dictionary that leucoplakia may be associated with syphilis or that it will probably become a cancer.

Many of the cases now under discussion were referred by dental surgeons who noticed a white patch during routine examination of the mouth. Thus these lesions were often diagnosed before they caused symptoms and while the secondary causative factors were still active. Gross oral neglect then was not a constant feature, and the grosser forms of leucoplakia described by other writers were not found. Only too often in the past the tongue has been examined by asking the patient to stick it out, so obscuring the floor of the mouth and ventral surface of the tongue, and perhaps that is why epithelial naevi have sometimes been missed.

Smoker's Keratosis.

There are 13 cases in this series where oral lesions are thought to have resulted from smoking. 12 are males and one female, and three-quarters of them presented in the fourth and fifth decades. They represented a cross-section of the community, but 4 of the 5 patients whose lips were involved were manual workers of rather low intelligence. Ten were pipe smokers who tended to concentrate their smoking into perhaps two hours every evening ; two never

smoked less than twenty cigarettes a day ; and one smoked a cigar daily as well as twenty cigarettes.

The length of history and the severity of symptoms varied considerably from a white patch being noticed on the palate for 7 years, a sore palate for 2 years, to loss of taste for $1\frac{1}{2}$ years. Those with lip lesions were vague as to how long they had had them ; only one patient, the cigar smoker, complained of sore cheeks.

In none could the dental condition be regarded as satisfactory, and in about a third there was gross oral neglect with carious, nicotine-stained teeth encrusted with tartar.

Fig. 1.

The lesions.—In pipe smokers the palate and tongue were affected and in cigarette smokers the cheeks ; the appearance of the lesions varied according to the site. On the anterior half of the hard palate a well-defined, raised white plaque or plaques are seen on the side to which the stem of the pipe is directed. Fig. 1 is of such a lesion in a patient who removes his partial denture to enjoy his evening pipe. The surrounding mucosa may appear either erythematous or normal. A denture, if worn while smoking, completely protects most of the hard palate from the irritant effects of smoking (Fig. 2).

Another type of change on the posterior half of the hard palate, when seen in its exaggerated form, takes on the dignity of a distinctive clinical entity. At first the openings of the mucous ducts become visible as red pin-points and the intervening mucosa has a faint milky appearance. Then the openings of the ducts become slightly raised and finally a domed papule results that may be up to 0·5 cm. across and raised about 2 mm. above the surrounding mucosa

FIG. 2.

FIG. 3.

(Fig. 3). It has an umbilicated star-shaped red centre, but on occasion a small inner white spot may be seen. These papules increase in number and are closely set. The intervening mucosa becomes whiter and thicker, and has a tendency to desquamate in places, leaving beefy red raw areas. These papules are also seen on the soft palate, but a more common appearance there is a red velvety one ; the latter was most marked in the cigar smoker.

The cheeks showed a diffuse faint even milky whiteness of the mucosa which was maximal at the commissures and narrowed posteriorly, having upper and lower limits that appeared to be defined by the position of the teeth with the mouth in the partially open position (Fig. 4). The adjacent mucosa was normal

Fig. 4.

in appearance. The affected mucosa was slightly wrinkled, but in no case was there any marked induration or great thickening, except when there was a frictional keratosis superimposed at the occlusal line as a result of friction by the teeth.

Three patients had lesions in the floor of the mouth in the form of linear, raised, well-defined, white patches. The gingival margin around 4| in the cigar smoker was hyperplastic with a white papillomatous appearance. The tongue was affected in only three cases and here the lesion was a linear smooth tessellated bluish white patch that was given a depressed appearance by the adjoining papillae.

The lower lip was involved in 3 cases and the upper in 2. The lesions varied from a tessellated bluish white patch on each side of a groove in which the cigarette rested (Fig. 5) to a well-defined raised thick white plaque. In one case a raised firm nodular carcinoma was set on a mucosa that was extensively affected,

and other irritant factors were present as evidenced by the huge masses of tartar on the lower incisor teeth (Fig. 6).

Histopathology.—Biopsies were taken from the cheeks of three patients. In all the surface was well keratinized. In two the epithelium had a well-differ-

FIG. 5.

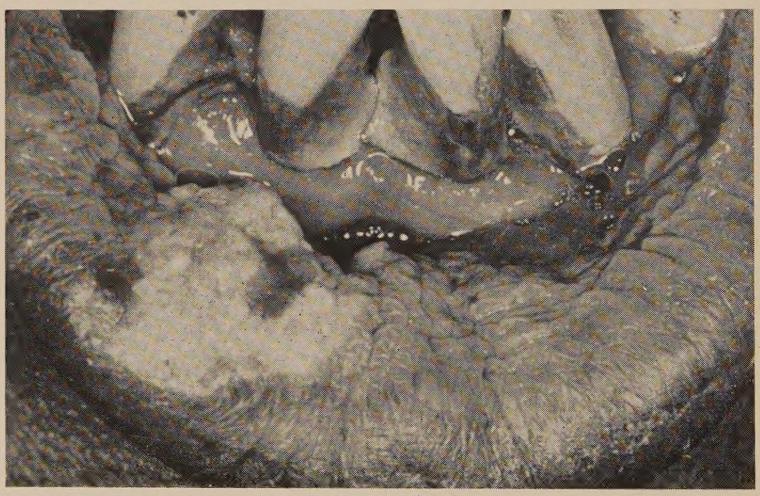

FIG. 6.

entiated keratin layer, no acanthosis and a flat basal layer ; in one there was melanin in the basal layer prickle cells and in the corium. There was only a very mild lymphocytic infiltration in these two cases, both the result of cigarette smoking, but in the third, occurring in a pipe smoker, the infiltrate was dense

and associated with liquefaction degeneration of the basal layer, acanthosis and multi-nucleated prickle cells (Fig. 7).

The gum of the cigar smoker could be regarded as a precancerous condition, for there was marked acanthosis with long forking epithelial ridges, parakeratosis and many mitotic figures, together with a dense plasma-cell and lymphocytic infiltration of the corium.

In two biopsy specimens, the junction of the normal palate and the affected area showed a slight increase of keratinization and acanthosis overlying a normal corium. Serial sections through one of the papules on the palate revealed a number of very interesting features. The opening of the mucous duct was moderately dilated, depressed, and lined by keratinized cells (Fig. 8) and below this the duct was dilated. The adjoining mucosa showed hyperkeratosis and acanthosis, and the corium adjacent to the duct was infiltrated by lymphocytes and contained dilated capillaries. Sections taken a little further away from the opening of the duct showed the corium to be infiltrated by polymorphs and covered by only a very thin layer of exfoliating epithelium (Fig. 9).

Discussion.—All writers are convinced that smoking, besides aggravating other forms of irritation in the mouth, can also be an irritant to the mucosa by itself. This results from the generation of heat, together with the products of combustion. The pipe is the major offender, and McCarthy (1937) believed that the leucoplakia of the palate resulted from smokers inhaling the smoke into the oral cavity in the form of a funnel, and that the exhalation of smoke through the corners of the mouth produced similar lesions at the commissures.

Cummer (1946) reviewed the literature of leucoplakia of the palate (papular form) and its relation to the use of tobacco, and his Fig. 6 shows a serial section of a hyperkeratotic plug blocking the distal portion of a gland duct. Thus it appears that in the early stages the red pin-points are the openings of the mucous glands, but that they are periodically blocked by keratin plugs, leading to dilatation of the underlying ducts ; and that, as the orifices are widened, so they become depressed, giving the umbilicated centres to the papules. The more extensive red rim surrounding the duct opening is due to the exposure of the corium in the peculiar exfoliation that is seen in the section in the present paper and in Cahn's paper (1941).

Thoma (1941) first gave the name stomatitis nicotina to this condition of the palate and he described it as a periodically exfoliating leucoplakia with typical papular nodules that are due to the formation of small cysts in the glandular system of the mucosa. This cyst formation he ascribed to the occlusion of the excretory ducts by partly desquamated keratinized epithelium and this was supported by his photomicrographs. On the other hand, Cahn studied serial sections of one of the nodules and was unable to find any blockage of the excretory duct or accompanying cyst formation, but he found an area where the hyperkeratotic epithelium was missing, exposing the corium. The present

work really confirms the findings of both workers, for blocking of the keratinized openings of the ducts could easily lead to retention cyst formation of the glandular system as described by Thoma, and the peculiar exfoliative condition described is the same as that noted by Cahn. The clinical appearance of the umbilicated red centre to the papule is the widened depressed opening of the excretory duct, the more irregular red margin is due to the exfoliation of the epithelium, and the size of the nodule is to some extent controlled by the periodical plugging of the duct and the formation of mucous retention cysts.

The clinical appearance of the white thickening of the mucosa of the cheek was most marked in those who smoked cigarettes, for in this form of smoking the smoke is more diffusely distributed in the mouth and perhaps the less well protected, non-keratinized, buccal mucosa is affected first, especially those parts not protected by the teeth in the rest position. As the biopsy specimens showed, the mucosa becomes evenly keratinized and in only a very heavy pipe smoker was there any marked reaction in the corium. Neither acanthosis nor parakeratosis was observed and it appears that the cigarette smoke has the effect of just keratinizing an otherwise non-keratinized epithelium.

Frictional Keratosis.

There are 18 cases in this series where lesions are thought to have resulted from friction ; 15 are male and 3 female, and two-thirds of them presented in the fourth and fifth decades. No special group of people was singled out for the mild lesion involving the occlusal line of the cheeks, but manual workers were those whose commissures were involved.

Many were moderate smokers and no doubt it was that that made the site of friction sting and so brought it to their notice. Some consciously chewed their cheeks, while others did so in their sleep and the latter patients complained of soreness first thing in the morning. Soreness was the presenting symptom when the commissures and the tongue were involved, but lesions on the occlusal line of the cheeks were often incidental findings by dental surgeons. Often there were gross abnormalities of occlusion with teeth out of alignment, some missing and others with rough, ragged edges. Oral hygiene was fair, but rarely good.

The lesions.—The occlusal line of the cheeks was involved bilaterally in 7 cases, unilaterally in 2 ; the commissures bilaterally in 6, unilaterally in 2 ; the tongue in 2 ; and the gingivae in 3 cases.

The lesions on the cheeks had three general patterns. The most common was a bluish white band about 1 cm. in diameter extending the full length of the interocclusal line (Fig. 10). If the friction of the cheeks was severe there was a red central area, and occasional ecchymoses were seen. The adjacent mucosa was erythematous and sometimes pigmented. Long-standing lesions were easily palpable both to the examining finger and to the patient's tongue, and in

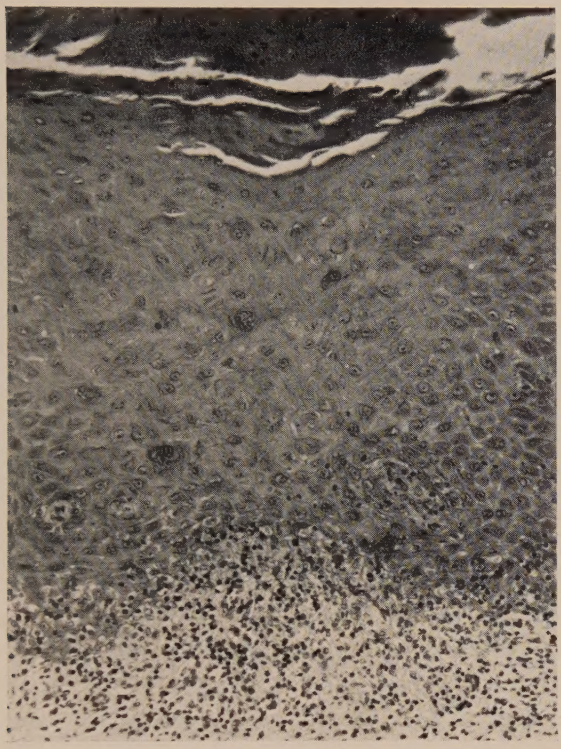

FIG. 7.

FIG. 8.

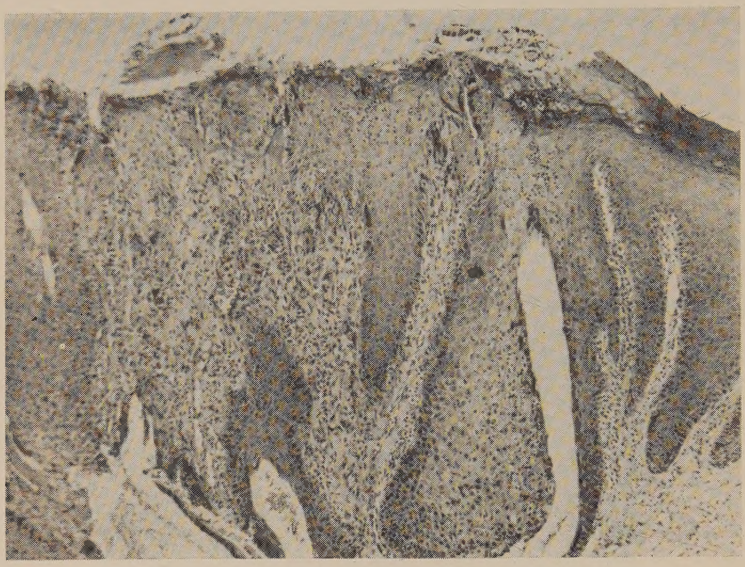

FIG. 9.

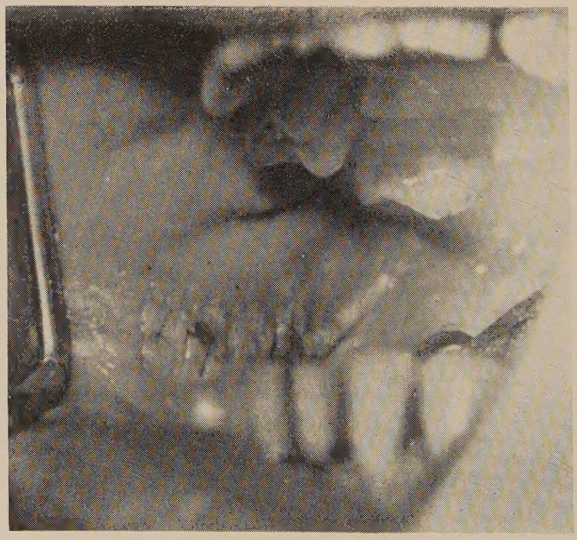

FIG. 10.

the more severe cases there was a definite heaping up of the keratin into white ridges which radiated from a central nodule and formed cuffs which accurately fitted the cusps of the teeth. The colour was often modified by foods and by smoking.

The second pattern consisted of a small nodule of white, thickened mucosa in the posterior part of the cheek resulting from friction of a buccally tilted upper third molar.

The third pattern, that which causes most discomfort, occurs symmetrically at the commissures where the cheek is thinnest and continually on the stretch. It starts as an erythematous area, sometimes with small excoriations. It later becomes milk white in colour and then progresses to a thickened white plaque. The latter is set below the level of the surrounding mucosa due to associated scarring. In one patient an angular cheilitis resulted from attempts to keep the sore corners of the mouth moist. The only patient wearing full dentures and in whom the commissural keratosis was unilateral had a small fibro-epithelial polyp associated with it. Variations in these patterns were observed according to the number of teeth involved, and a band on a partial denture or a ragged edge of a tooth gave a localized keratosis.

Two patterns were observed on the tongue. In the first, curved linear white patches on each side of the dorsum of the tongue resulted from mild friction from the palatal cusps of the upper teeth. The second was a more localized keratosis on the lateral margin of the tongue resulting from the sharp edge of a tooth. Even in the earliest stage the milky white plaque has a crinkled, tessellated appearance and where friction is most marked it is well defined and thickened.

On the gum frictional keratosis appears as a granular white thickening, most commonly seen in edentulous areas following the extraction of lower molar teeth when the upper teeth are still in position. In one case the palatal gingiva adjacent to the upper incisor teeth was involved because the bite was so close that the lower incisors impinged on it.

Histopathology.—Nine biopsy specimens were taken from 8 patients, one from the tongue, one from the gum and 7 from the cheek.

The first reaction of the non-keratinized buccal mucosa to friction was slight acanthosis and parakeratosis. Then followed an inflammatory reaction in the corium with dilated capillaries and a lymphocytic and plasma-cell infiltration. Histiocytes laden with haemosiderin often gave evidence of old extravasation of blood. The most severe reaction was noted in the commissures with broadening and deepening of the epithelial ridges overlying a diffuse dense chronic inflammatory reaction in the corium. In only two long-standing cases was there a good keratin layer.

The normally keratinized gingiva showed only hyperkeratosis without any underlying reaction in the corium.

The tongue showed a thick keratin layer and granular layer without any marked acanthosis, overlying a corium lightly infiltrated with lymphocytes and plasma cells.

Discussion.—Thus it appears that the clinical appearance and histological features of a frictional keratosis vary according to the part of the mucosa involved and the age of the lesion. On the well-keratinized gingival mucosa the epithelium is already well adapted to a response to mild friction and does so by hyperkeratosis and acanthosis overlying a normal corium ; the lateral borders of the tongue, although not normally keratinized, appear to become so quite readily, but this does not prevent a mild inflammatory reaction in the corium. In contrast, the non-keratinized mucosa of the cheek reacts to friction by parakeratosis and an inflammatory reaction in the corium, and only if this reaction is sustained does true keratinization occur. The latter is a better protection to the corium than parakeratosis, so that the inflammatory reaction becomes less severe.

Once the buccal mucosa has keratinized, even if the source of friction is removed, it no doubt takes a very long time to revert to normal and this possibly accounts for the varying reports in the literature as to whether or not the patches disappear.

Hazen and Eichenlaub (1922) thought that rough teeth, by causing mechanical irritation, inaugurate the disease in a vast number of cases, and that syphilis is an accidental rather than a causative factor. Fox (1925), who was convinced that in the majority of cases either syphilis or smoking is concerned in the causation of leucoplakia, thought these authors placed too much emphasis on mechanical irritation. At the present time there can be little doubt that a frictional keratosis is the most common form of white patch in the mouth.

The Leucoplakia of Tertiary Syphilis.

This is now becoming a rarity, but it still retains the pathognomonic clinical features that enable its easy recognition. In 1900 Fournier noted that in a series of 324 patients with leucoplakia 80% had had syphilis and the other 20% could not be absolutely excluded. In 1925 Fox noted that in a series of 40 patients with leucoplakia, 65% of them had a previous history of syphilis, a positive blood Wassermann reaction or clinical syphilitic manifestations. In the present series only three cases (8%) could definitely be related to syphilis. It is difficult to know whether leucoplakia from all causes has become less common over the last fifty years, but there can be no doubt that syphilis, although a very important and serious predisposing cause, is an infrequent one.

In each of the three patients in this series, the tongue was very painful to smoking, spices and hot foods. Two of them had a commissural keratosis as well. These three cases illustrate the probable natural history of a high propor-

tion of such tongues. All had strongly positive blood Wassermann and Kahn reactions.

Case 1.—A man aged 39. Early superficial atrophic glossitis with red areas and shortened papillae interposed with smooth areas having a salivary sheen. On palpation the tongue was supple.

Case 2.—A man aged 58. Smooth dry slightly lobulated swollen tongue. White sheen on dorsum and shiny margin. Two ulcerated areas covered with yellow sloughs in posterior half of midline. Limited extension and felt like a bladder of lard.

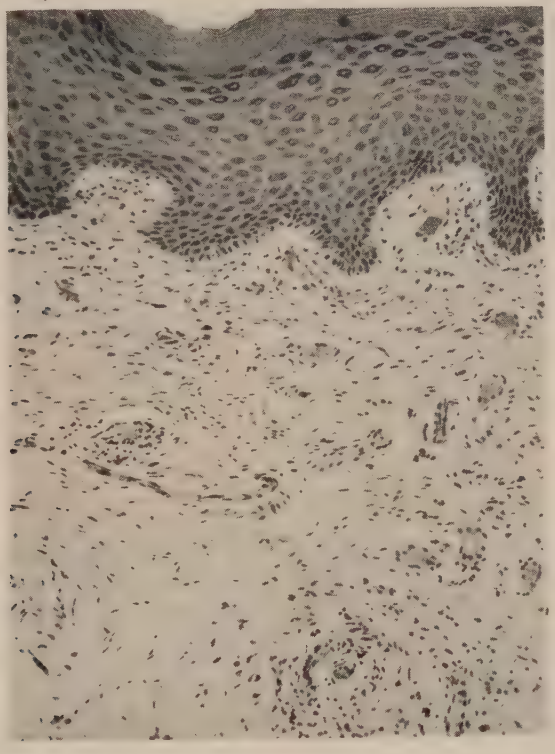

Fig. 11.

Case 3.—A man aged 54. Dorsal surface of tongue covered with a hard white coat of keratin, criss-crossed with deep cracks. Anteriorly there was a slightly pedunculated, papillomatous firm mass which microscopically proved to be a carcinoma.

Histopathology.—A biopsy of the mucosa near the commissure was done in Case 1. The epithelium was keratinized in a regular manner with a well-marked keratin layer, granular layer and only slight acanthosis (Fig. 11). There were many dilated capillaries in the corium and around many of these was a mild infiltate of lymphocytes and plasma cells.

Discussion.—Although only one biopsy was done in this series, the findings

were very interesting. The changes in the epithelium were similar in every way to that of the nicotine keratosis in non-syphilitics. Nevertheless, the slight perivascular infiltration around the dilated capillaries in the corium was not seen in any other case. This rather suggests that the changes in the first place are simply a nicotine keratosis and that the systemic background of syphilis only affects the course of the condition in the later stages, as in the picture painted by McCarthy (1936) in his post-mortem findings.

King and Hamilton (1931) voice an opinion, which is echoed throughout the literature, that syphilis is an important aetiological factor only in the tongue, and that there is no proof that antiluetic treatment given after leucoplakia has developed prevents the development of cancer. Fox found that treatment for syphilis may help the subjective symptoms but does not alter the leucoplakia.

The following is an extract from a paper by Sturgis and Lund (1934) which leaves little doubt that syphilitic leucoplakia of the tongue is a precancerous lesion.

"*Syphilis in cases of leucoplakia that develop cancer before, during or after treatment.*

Location of leucoplakia.	Total cases.	Evidence of syphilis. % of total cases.	Evidence of syphilis. % of treated cases.
Tongue	45	48	57
Rest of mouth	93	5	7 "

Idiopathic Keratosis.

There is another group of patients who present areas of keratosis for which no cause can be found. One can only speculate that there may be an unknown systemic factor or an altered tissue sensitivity due to a developmental anomaly. The majority of these lesions are diffuse and symmetrical, either on the tongue or cheeks, which suggests systemic factors rather than local causes, and like many conditions of the oral mucosa no satisfactory name can be applied ; there is a still larger number in which we have no idea of the cause.

Two cases in this series illustrate this lesion on the tongue. Both are non-smokers.

Case 1.—A male student aged 21 had noticed a white sheen to his tongue as long as he could remember. The lateral aspects of the anterior two-thirds of the dorsum of the tongue were smooth and covered with a thin white sheen (Fig. 12). One small patch ½ cm. across was whiter and thicker.

Case 2.—A woman aged 47 had noticed white patches for 9 years. These patches sometimes came off, leaving sore areas which took up to 8 weeks to heal. There was diffuse white thickened mucosa on dorsum of tongue, loss of papillae in some parts. an eroded area and some scarred areas (Fig. 13). The left cheek also showed similar diffuse plaques.

Histopathology : (left cheek)—Well marked keratin and granular layer, slight acanthosis overlying a normal corium.

FIG. 12.

FIG. 13.

Fig. 14.

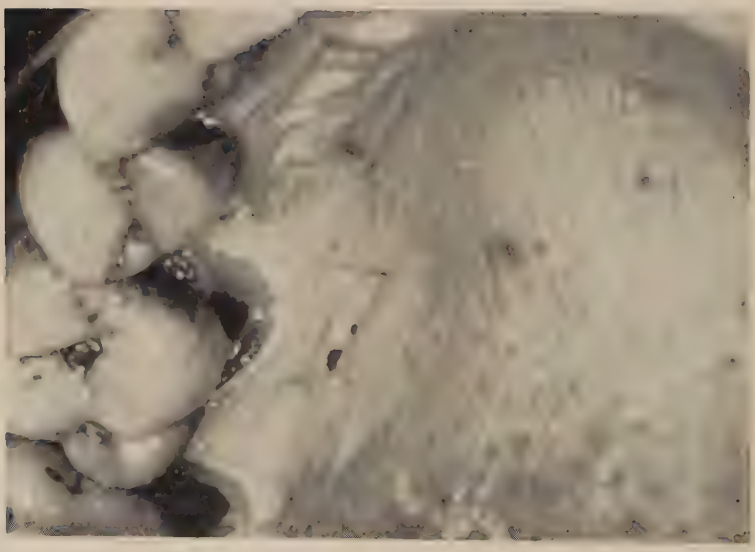

Fig. 15.

Discussion.—From time to time other causes for leucoplakia have been put forward. McCarthy (1936) and Becker (1937) both suggested that leucoplakia of the tongue could be secondary to the bald tongue of a severe anaemia, and other writers have suggested lack of vitamin A.

Measurable electromotive forces do exist in the mouth in the presence of dissimilar metals, but the magnitude of the currents as measured by Hazel, Charles and Diamond (1950) (0·1 microampere and 0·45 volts) is far too small to produce appreciable direct damage to the tissues in the mouth. Since such a state of affairs is so common it must, as an aetiological factor, remain theoretical.

No doubt conditions resembling leucoplakia in colour alone have led observers to describe associated general disorders as causes of leucoplakia. Ullmann (1936) suggested hypercholesteraemia as occurring in cases of leucoplakia, and despite the fact that he described serum levels of only 180 mg.%, it may have been cholesterol deposits he was describing and not patches of keratosis. Fig. 14 is of a man aged 35 with a serum cholesterol of 860 mg. % with cholesteomata on the elbows, knees and hands and one in his tongue. With treatment of his diabetes, the tongue was normal in 14 days.

It must be very doubtful whether hot and highly spiced foods ever alone cause a keratosis.

There are certain similarities between these two cases described under idiopathic keratosis and the epithelial naevi, but the painful desquamation in one case and the complete loss of papillae over large areas of the tongue in the other are important clinical differences from what is found in epithelial naevi.

Epithelial Naevi of the Oral Mucosa.

Congenital anomalies of the mucous membrane have not received the same attention as those of the skin, as a result of the tendency to class all white patches on the mucosa as leucoplakia. Occasionally in the dermatological literature, reference has been made to the association of anomalies of the oral mucosa with disorders of keratinization of the skin, such as in patients suffering from generalized ichthyosis, pachyonychia congenita, dyskeratosis congenita palmaris and plantaris, and dystrophia corneae.

Ormsby and Montgomery (1954) say that the term epithelial naevus was used by Gans and Jadassohn to describe naevoid disturbances, either present at birth or developing later in life, in which hyperplasia of the prickle cells occurs without the presence of ordinary naevus cells. It gradually progresses to a certain point and then remains stationary. They regard it as an abnormal cornification upon an apparently hereditary basis ; the condition is related to the ichthyosiform naevi. Cockayne (1933) describes under naevus ichthyosiformis systematicus : " Linear naevi, often verrucose in character and following a segmental distribution, are of no great rarity. As a rule they are symmetrical

and may not be present at birth, but develop in childhood, at puberty or in early adult life. In the great majority of cases no family history of a similar condition is obtainable and yet in some, if not in all, there must be a genetic basis. A linear naevus may be inherited as a dominant, but it is possible that it is dependent on two independent dominant genes or else other genes prevent its development in many cases."

Hyde (1909) described an unusual naevus of the tongue in a boy aged 5 which had lasted several years. It was composed of a linear group of lesions in bands $\frac{1}{2}$ in. wide and $1\frac{1}{2}$ in. long on the side of the tongue and the corresponding area of the cheek. Cannon (1935) described under the title " white spongy naevus of the mucosa " the appearance of the buccal mucosa in a woman aged 38 years which had also been present in three generations on the maternal side. The mucosa was white and opalescent but with a spongy appearance due to clear follicular openings. In this woman the labia, vagina, anal canal and rectum were also affected.

Touraine (1937) in describing pachyonychia congenita with keratodermia with disseminating keratosis of the skin and mucous membranes describes the mouth lesions as follows : " *Les plaques restent souples, non infiltrées, de plus, elles varient suivant tes périodes et même dans la journée, plus apparantes, plus épaisses le matin que le soir.*" Ludy and Shirazy (1941) reported under the title of " congenital leucokeratosis mucosae oris " the appearances of the oral mucosa in a woman aged 27. The cheeks, gums, palate and anterior pillar of the fauces and the vermilion border of the lips were blanched and glistening as if painted with a thin film of milk. The mucosa was loose, supple, flexible, somewhat villous and moved readily. It varied in appearance from day to day and was sometimes thicker in the morning. The tongue was not involved. The family history revealed that the patients' mother, her maternal aunt and her two sisters had this same blanching of the oral mucosa. Although it is not stated where the biopsy specimen was taken, it is described as showing keratinization with a moderate non-specific inflammatory process. Everett and Noyes (1953) describe a white, folded gingivo-stomatitis affecting two brothers aged 23 and 29. Each had a folded white soft oral mucosa of the cheek and vestibular surface of the lips, involving also the ventral surface of the tongue, and in one the gingivae were affected as well. The condition had existed since early adolescence and no anomalies of the skin were demonstrated. From the illustrations in the text it would appear to simulate Case 5 in this series. Biopsies were made and a similar dyskeratosis to that seen in Case 2 of the present series was observed ; there was vesiculation and desquamation in isolated areas.

Since so few cases have been reported in the literature, the main features of six further ones will be described in note form.

Case 1.—A woman aged 30. Noticed slightly rough white patches in floor of mouth for 10 years, over which time she thought they had slightly increased in size. Well-

defined dense white patch of wrinkled, thickened but quite supple mucosa in the lingual fold adjoining and just spreading on to the gum in $\underline{2}$–$\underline{6}$ region. Smaller patch on the side of the lingual fraenum. Adjoining mucosa normal.

Histopathology : pronounced hyperkeratosis and acanthosis of stratified squamous epithelium overlying normal corium.

Case 2.—A man aged 43. Noticed white thickening of palate for one year. Hard palate covered with a white thickened mucosa, sparing the gingival margin (Fig. 15). Also erythematous areas following desquamation, and other areas were pigmented.

Histopathology : marked hyperkeratosis and granular layer, without any noticeable acanthosis of stratified squamous epithelium, overlying normal corium.

Case 3.—A woman aged 48. Noticed roughness in floor of mouth for 9 years. Well-defined dense white patches of crinkled, thickened but supple mucosa in the lingual sulcus $4 \mid \overline{4}$ and spreading on to the gum.

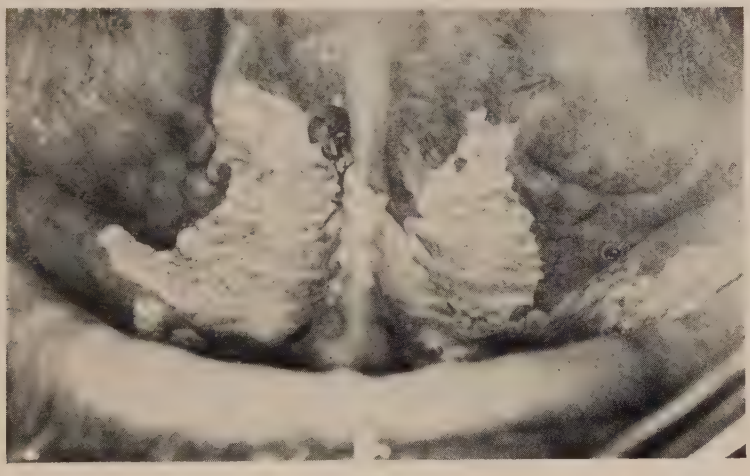

Fig. 16.

Histopathology : The attached gingiva showed a marked hyperkeratosis and granular layer without any noticeable acanthosis overlying a normal corium Junction between normal and abnormal gum clear cut and at this point there is a very slight lymphocytic infiltration of the corium.

Case 4.—A woman aged 39. Noticed white patch in floor of mouth for at least 20 years. Almost symmetrical, well-defined, butterfly-shaped, white, thickened, crinkled but supple mucosa on the ventral surface of the tongue spreading anteriorly on to the floor of the mouth and reaching the gum in $\overline{5}\ \overline{3}$ region. Adjoining mucosa normal. (Fig. 16).

Case 5.—A woman aged 18. White patches in mouth present from birth. Two brothers and 2 sisters similarly affected. Mother first noticed white patches in mouth at 17. Condition of grandparents not known. Father normal. Silver to white folded thickening of whole oral mucosa including vermilion border of lip. Tongue had a silvery appearance.

Case 6.—A man aged 34. Noticed white gums for many years. Thickened white wrinkled gum $\overline{765} \mid \overline{45}$ buccally and $\overline{87} \mid 78$ palatally. The gingival margin was spared.

I am indebted to Professor M. A. Rushton for details of Cases 5 and 6.

Discussion.—To summarize the above findings, an oral epithelial naevus may be discovered in either males or females at any age, for being symptomless it may remain unnoticed by the patient. The patient may notice that the mucosa is rough to the tongue and the degree of roughness varies from day to day and even from one time of the day to another. It can be present at birth or it can develop later in life. A family history was obtained in only one case in the present series. No other abnormality of the skin was discovered in any of the patients affected.

The lingual sulcus in the floor of the mouth and the attached gingivae lingual to the lower incisors appears to be a favourite site, but any part of the oral mucosa may be involved except the actual gingival margin. In all cases there was an appearance of symmetry.

The affected area is dense white well-defined and raised above the level of the surrounding mucosa. The latter is normal in appearance. The white patch has a regular wrinkled appearance without tessellation or wartiness on the floor of the mouth and on the gum. On the floor of the mouth and the ventral surface of the tongue it resembles the undulations left in the sand by an ebbing tide, quite different from leucoplakia, which is more like paint cracking in the sun. The normal anatomy of the palate gave the lesion a slightly tessellated appearance but there is no papillary formation as is seen in a nicotine keratosis. Irregular small red areas of desquamation are sometimes present. The adjacent two millimetres of the gingival margin are always spared.

Histopathology.—From a study of the two biopsy specimens taken from the lingual sulcus, which when normal is not keratinized, there appear to be two main abnormalities: (i) The keratinization of a normally non-keratinized mucosa and (ii) an increased rate in the production of keratin as shown by the very thick layer of keratin, by acanthosis and by an unusually thick granular layer (Fig. 17). In places the keratin layer has a definite basket-weave appearance. There is no abnormality of the underlying corium and the margin of the affected area to the normal non-keratinized mucosa is well defined.

In the palate, which is normally keratinized, there is only one abnormality—that of keratinization. The keratin layer, thicker in fact than the prickle-cell layer, suggests not so much an increased rate of keratin production as a failure of the keratin to separate. There is no acanthosis or change in the corium.

In one area a break in the epithelium was noticed which had on either side a peculiar dyskeratosis below the granular layer, and it seems that this change impaired the mechanical properties of the epithelial layer and that it split,

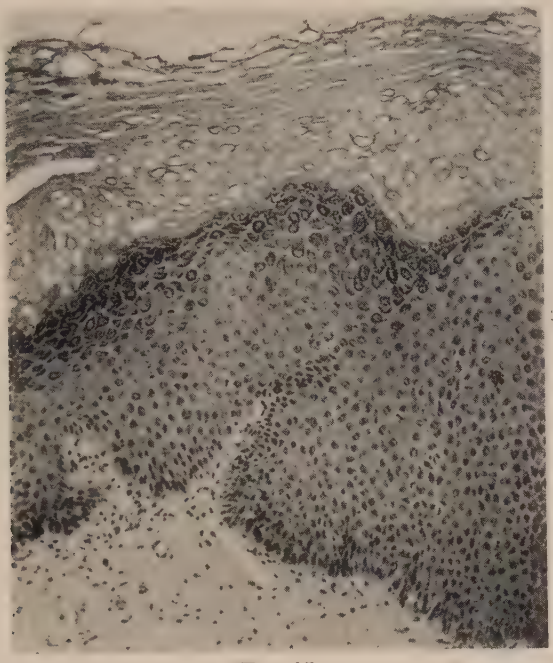

FIG. 17.

FIG. 18.

exposing the underlying corium (Fig. 18). The dyskeratosis takes the form of a pyknosis of the nuclei of the prickle cells and a premature keratinization. There is a mild polymorphonuclear infiltration in the area secondary to the split and a hyalinization of the adjacent fibrous tissue. This peculiar dyskeratosis and splitting of the epithelium probably accounts for some of the red areas seen in the palate of Case 2, from which this biopsy was taken.

Differential Diagnosis.

The most important condition to consider in the differential diagnosis of leucoplakia is lichen planus. This may be straightforward when there are skin manifestations of lichen planus as well, but in a series of 50 cases similar in every way to the present series of leucoplakia, analysed by Cooke (1954), in only one-tenth was there any skin involvement as well. In contrast to leucoplakia, it is more common in women, there will be a history of the lesions coming and going, the commissures are usually spared and the papules are usually in a characteristic symmetrical pattern. When the tongue is affected, the papillae are lost only in severe cases and in the atrophic form. It is the confluent papular pattern which resembles leucoplakia so closely that a biopsy may be needed and very careful attention must be paid to the following points in the histological picture before a definite diagnosis can be made. The hyperkeratosis or parakeratosis and acanthosis will be little different from leucoplakia ; but the saw-tooth appearance of the epithelial ridges, liquefaction degeneration of the basal layer, sub-epithelial oedema, which if extensive, separates the epithelium from the corium, and lymphocytic infiltration limited to the upper and middle layers of the dermis and having a well-defined lower border—all these point towards lichen planus. The infiltrate is often denser than in leucoplakia and plasma cells are rarely present.

It is possible that the atrophic form of lichen planus, when accompanied by shallow erosions on the tongue, may be mistaken for leucoplakia undergoing desquamation, but the characteristic pearly white papules would be seen elsewhere in the mouth. Histological examination of a non-eroded area would show atrophy of the epithelium associated with the other features just described.

A Technique for Biopsy of the Oral Mucosa.

The difficulties of obtaining good biopsy specimens from the oral mucosa are mainly those of access, the control of haemorrhage, and the slightest trauma to the specimen during its removal, which will render any histological findings such as an early bulla formation subject to suspicion.

In the following technique with which all the material described in this paper has been obtained, the tissue removed is untouched by forceps, and every attempt is made to obtain a specimen of even thickness throughout, thus avoiding shallow and wedge-shaped fragments.

This technique, illustrated in the accompanying diagrams, is carried out under local anaesthesia: 2% novocaine, 1 50,000 adrenalin. No antiseptics are applied prior to the biopsy.

The local anaesthetic is given with a short needle (1 in. gauge 21) away from the site of the lesion to be examined, so as to reduce any risk of artefact, and then the first incision is made with a Paragon blade No. 11 (Fig. 19*a*). This blade is especially

FIG. 19*a*.

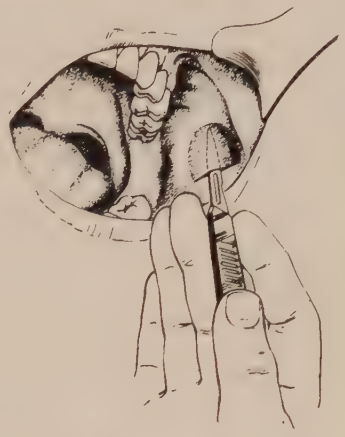

FIG. 19*b*.

FIG. 19*c*.

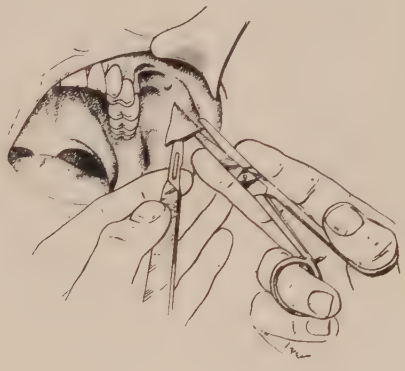

FIG. 19*d*.

useful, for it cuts on its point, and is well designed for the next step of undermining the mucosa to the required depth (Fig. 19*b*). The next stage is another incision, completing two sides of a triangle (Fig. 19*c*), after which the biopsy specimen can be lifted off its bed with the point of the blade and finally cut free with scissors (Fig. 19*d*) and placed directly into 4% formalin. If the specimen has a tendency to curl, it is first placed on a piece of blotting paper, after which it will retain its form in the fixing fluid.

One black silk suture is all that is necessary to close the incision and arrest any haemorrhage. Healing is uneventful and the patient suffers no more discomfort than if he had bitten his cheek. The stitch is removed after two days.

Summary.

The literature of leucoplakia buccalis is reviewed and the varying clinical and histological pictures are illustrated and discussed in the light of an analysis of 36 cases and of biopsies from 17 of them. The pattern of the reaction of the oral mucosa to irritation depends not only on the nature of the irritant but on whether the affected part is normally keratinized or not. Mucous glands give to the palate a characteristic reaction to pipe smoking. Other forms of keratosis are discussed for which no obvious irritant cause could be found.

The literature of oral epithelial naevi is reviewed and the clinical and histological pictures are illustrated and discussed in the light of an analysis of 6 cases and of biopsies from 3 of them.

The essential diagnostic points between lichen planus and leucoplakia buccalis are discussed.

A biopsy technique for the oral mucosa is described.

This study has been carried out in the Department of Dental Medicine, Guy's Hospital. I wish to thank the Director, Professor M. A. Rushton, for permission to submit this paper and for his helpful advice and criticism in its preparation. I should also like to thank the staff of Guy's Hospital Dental School and the dental practitioners who have so kindly referred patients to the Department. I am grateful to the Department of Dental Photography and to Mr. J. E. Hutchinson for the photographs and photomicrographs.

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A NOTE ON THE NATURAL HISTORY OF LICHEN PLANUS.

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In 1951 trials were carried out at St. John's Hospital for Diseases of the Skin on the effects of antibiotics on a number of skin diseases. Lichen planus was one of the diseases chosen for these trials. During the trial it soon became apparent that the antibiotics used (chloromycetin, aureomycin and terramycin) were producing no beneficial effect on the patients and so the trial was abandoned (M.R.C. Trials, 1954). It was realized, however, that little was known of the natural history of lichen planus, so that it was difficult to assess the real effect of treatment.

Effect of Treatment.

In order to obtain further information on the natural history of lichen planus it was decided to treat a number of patients with standard methods of treatment and to compare their progress with untreated controls. The first group of patients were treated with Stovarsol (acetarsol B.P.) (1 grain [60 mg.] daily by mouth) and the second group with mercury (60 minims [4 ml.] liquor hydrargyri perchloridi B.P. three times a day by mouth). Two out of three patients were given one or other drug and the third a bland substitute. An arrangement was made with a hospital dispenser to select the control patients so that the physician assessing progress would not know which patients were receiving treatment and which were controls. All patients were also given soothing local applications, and when irritation was severe they were given Phenergan (promezathine hydrochloride, B.P. Add.) or a barbiturate in addition. It was not considered that these had any effect on the disease other than to reduce irritation. In the more resistant cases mercurial ointments were tried locally without producing any marked improvement.

One hundred and twenty-one patients were observed, 38 treated with Stovarsol, 39 with mercury and 44 were controls. The results were remarkably similar in each series and are given in Table I.

It is apparent that neither Stovarsol nor mercury, in the doses used, had any effect on the progress of the disease. The last two columns in Table I show the number of patients who were lost before the disease could be considered cured or who still had some evidence of activity at the time of writing, but had been observed for a minimum period of one year. Many of the former cases were lost in the first few months of treatment but could not be traced, and others in the latter group were much improved when last seen.

TABLE I.—*The Effect of Treatment on Lichen Planus.*

Treatment.	Number of cases.	Time taken for clearance after commencement of treatment. 3 Months.	6 Months.	1 Year.	Over 1 Year.	Much improved.	Failed.
Stovarsol	38	6	11	9	6	2	4
Mercury	39	6	18	8	1	2	4
Control	44	5	19	11	2	5	2
Total	121	17	48	28	9	9	10

The last two columns show those patients who were much improved after one year of observation but had not entirely cleared at the time of writing and those who were lost before they had shown any great improvement and could not be traced by letter.

The patients were selected to some extent in that they all had some typical acute or subacute papules. No patients with hypertrophic plaques only were included, although some had hypertrophic lesions in addition to the acute or subacute papules.

Penicillin has been reported as having a favourable effect on the course of the disease (Hård and Holmberg, 1954) and the author of this article believes he has been able to confirm this on a few selected patients. There is some evidence that ACTH rapidly controls the condition and may prove useful in severe cases (Meara, 1955). Both these methods warrant further trial.

DURATION.

One hundred and two patients were followed until all evidence of activity in the skin lesions had subsided, and these are shown in the centre columns of Table I. Table II shows these patients, and includes the number of months each had symptoms of the disease before they came under observation. This probably gives a fair assessment of the natural duration of lichen planus. The omission of the 19 not followed until clearance would not greatly affect the result. It will be seen that about 23% are clear in six months and 64% within a year of the start of an attack. The average length of time the disease had been present before treatment was started was $4\frac{1}{2}$ months, ranging from three weeks to two years.

TABLE II.—*The Natural Evolution of Lichen Planus.*

Treatment.	Number of cases.	Time taken for clearance from start of attack. 6 Months.	1 Year.	18 Months.	2 Years.	Over 2 years.
Stovarsol	32	5	14	6	4	3
Mercury	33	11	8	10	4	0
Control	37	7	20	6	4	0
Total	102	23	42	22	12	3
Progressive total		23	65	87	99	102
		23%	64%	85%	97%	100%

From the previous history and subsequent follow-up it was found that less than one in five had more than one attack of lichen planus. In most cases relapses followed a similar course to the first attack. The age at onset varied from 20 to 82 years.

The patients whose lesions cleared quickly usually showed small guttate lesions only, but this was not invariable. Hypertrophic plaques were always slow to clear, but there was steady improvement, especially if the patients were prevented from scratching by the use of occlusive dressings.

The very rapid clearance seen in some patients must act as a warning in assessing the effect of any special method of treatment.

Clinical Features.

Seventy-seven per cent. of patients had some buccal involvement, usually without symptoms, and it was almost always possible to see evidence of this after the skin lesions had faded. No attempt was made to follow patients after activity had subsided, so that buccal lesions and residual pigmentation of the skin were often still present when the patients were discharged.

Nail deformities were encountered in 11 patients, a higher number than was expected. The deformities varied from a diffuse pitting or vertical ridging (Fig. 1) to complete destruction of the nail. The most characteristic change was a thinning of the nail plate followed by an overgrowth of the cuticle to form a mantle, which covered a considerable portion of the nail (Fig. 2). Shedding of the nail may be permanent or there may be partial regrowth (Fig. 3). Often when the nail was involved there were papules of lichen planus on the dorsum of the distal phalanx close to the nail, but this was not invariable.

In this series no case of alopecia was seen, though it is well known that the appearance of pseudopelade may be produced by lichen planus. In four cases vitiligo was found in association with lichen planus.

Although some patients showed anxiety or other nervous traits and a number of cases were precipitated by emotional factors, such as the death of a near relative, in the majority these did not appear to be factors of importance and the aetiology remains quite obscure.

A few typical case histories are given to show the great variations that are encountered.

Case Reports.

Case 1.—This man aged 82 was first seen in November 1951. Four weeks previously he had noticed a rash developing on his arms which caused itching and discomfort. He had suffered from no previous skin complaint and looked young for his age.

When first seen he had a few typical papules on each wrist and an area of lichenification over the dorsum of each forearm, where lichen planus papules had become confluent.

He was given Stovarsol 1 grain daily by mouth and calamine lotion with 1% phenol locally. After one month there was slight improvement and this was maintained, so

FIG. 1.

FIG. 2.

that at three months there was itching only at the edges of the plaques and by four months all activity had subsided, though much residual pigmentation remained.

Summary : First attack of lichen planus at 82 which lasted a total of five months. Treated with Stovarsol.

Case 2.—A woman aged 48. Eruption began at the end of September 1951 on the right wrist and left shoulder. It quickly spread to involve the whole of the trunk and limbs. The patient inclined to worry easily, but otherwise was quite fit and had no serious illness and no skin trouble previously.

When first seen in December she had very extensive lichen planus, consisting of a mixture of small and large papules and some crusting from excoriations on the legs. She had a few small patches of leucoderma on the feet. The mucous membranes of lips and buccal cavity were extensively involved in the characteristic reticulate pattern, and there were some white plaques on the tongue.

Fig. 3.

Treatment was started with Stovarsol 1 grain daily by mouth and calamine lotion locally. There was slight improvement for six weeks and then the condition became more severe. By February 1952 her mouth had become sore and some of her toe-nails became opaque, the great toe-nails being most affected. The skin lesions persisted with but slight tendency to clearance and in July 1952 her left great toe-nail was shed. From July onwards there was a steady improvement in the skin condition, but the right great toe-nail and right middle toe-nail were shed. The nails regrew partly, but the greater part of them was permanently destroyed. Some skin lesions persisted for another twelve months, but by July 1953 all activity had subsided and all that remained was extensive pigmentation, lesions in the mouth and the deformed nails. For almost two years the patient took Stovarsol because attempts to stop the drug were discouraged by the patient. She said that taking the tablets made her feel better and she had great faith in their effect.

Summary : Severe attack of lichen planus which lasted almost two years and was accompanied by much involvement of mucous membranes and loss of toe-nails. Treated with Stovarsol. Eventual complete clearance except for nail deformities.

Case 3.—A married woman aged 41 with two children was first seen in March 1953. Three months previously she had developed a rash on her chest which spread gradually. She had no previous skin trouble and was otherwise healthy, but worried a good deal, as her husband's work was rather spasmodic. She had a slight stutter.

Examination revealed typical subacute lichen planus papules on the chest and small lesions on the abdomen. The mucous membranes were clear at first, but later she developed lesions on her lips.

She was given liq. hydrarg. perchlor. 1 drachm *t.d.s.* For the first month the condition continued to spread but gradually began to fade, and in three months was clear except for staining.

Five months later she developed a few new active lesions on the back and was again given mercury. These lesions cleared in the next three months and have not again recurred.

Summary: Typical subacute lichen planus which cleared in three months on mercury, relapsed five months later and again cleared in three months.

Case 4.—This man, aged 41, was first seen in May 1954 when he had large guttate lesions of lichen planus on his abdomen and upper thighs. The lesions had been present for eight months, and for the previous two months he had been taking phenobarbitone without improvement. There was considerable itching. The mucous membranes were clear. He gave a history of a previous attack of lichen planus in 1951.

He was given liq. hydrarg. perchlor. by mouth and calamine lotion locally. The itching subsided quickly but the lesions persisted, and it was not until September that there was any real evidence of clearance. A few active papules persisted a further five months.

Summary: A mild case of lichen planus which had been present for eight months when first seen and persisted for a further ten months in spite of treatment with mercury.

Case 5.—A woman aged 23. When first seen in September 1954 this patient said that three months previously she had noticed a rash on her abdomen which increased in amount and spread along arms and legs. There was considerable itching.

She had no previous skin trouble but had a severe emotional upset 2½ years before, and had recently been run down.

Examination revealed extensive lichen planus of the small guttate type with lesions closely aggregated especially on the lower abdomen and back. Mucous membranes were clear.

She was given a mixture containing only chloroform and water; two weeks later she was greatly improved and in one month was clear.

Summary: Lichen planus of small guttate type which cleared in four months without active treatment and within a month of attending hospital.

Summary and Conclusions.

There is no evidence that Stovarsol 1 grain daily or liquor hydrargyri perchloridi B.P. 60 minims three times a day have any effect on the course of lichen planus.

During the four years 1951-55 121 patients with lichen planus have been seen and 102 were followed until all evidence of activity had subsided; 23% were clear within 6 months of the start of an attack and 64% within a year. Three cases took over two years to clear.

Mucous membrane lesions were present in 77% and nail changes in 9% Vitiligo was present in addition to lichen planus in four patients.

Recurrence or relapse occurred in a little under 20% of patients.

The aetiology of lichen planus remains unknown. Emotional factors are of importance in a minority of cases.

My thanks are due to the Consultants and Registrars at St. John's Hospital for Diseases of the Skin for referring patients to me and especially to Dr. Dowling for advice and criticism.

My thanks are also due to the photographic department of St. John's Hospital for the photographs.

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THE INCIDENCE OF ECZEMA IN EARLY CHILDHOOD.

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AND

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We have been unable to find any figures giving the incidence of infantile eczema in the population as a whole. The Registrar-General's Statistical Review of England and Wales for the two years 1950–1 gives information on the number of cases of eczema and dermatitis discharged from hospital. However, it is pointed out that the figures are not sufficiently representative to yield estimates of discharge frequencies on a national scale and, of course, they only deal with the more severe grades of eczema and dermatitis. An attempt has therefore been made to discover the number of cases which had occurred in a group of otherwise normal children.

Use has been made of the health visitors' cards which are available for every child. These cards contain a record of the child's health and any disease diagnosed by the family doctor would be noted. One difficulty regarding such documentary material is, of course, accuracy of diagnosis. However, the differential diagnosis of eczema in the child does not usually present much difficulty and on going through the cards it was possible to pick out the cases of eczema with a reasonable degree of certainty. It was impossible to separate out any particular pattern of eczema. In cases where there was doubt as to the diagnosis the parents were interviewed by the health visitors and unless the evidence pointed clearly to eczema they were discarded.

The population selected consisted of children who were living on a housing estate built after 1946 on the outskirts of Bristol. At the time of the survey (1955) the children were over one and under five years of age. The results of the investigation are summarized in Table I.

Table I.

Year of birth	1950	1951	1952	1953	Total
Number of children	198	287	282	257	1024
Cases of eczema	5	11	7	9	32
% of eczema	2·5	3·8	2·5	3·5	$3 \cdot 1 \pm 0 \cdot 56$

In order to discover if many cases of eczema had been missed by this examination of records, visits were made to the homes of a sample of 192 of the children in the group covered by the investigation. The health visitors made detailed

inquiries to try to find cases with a history of eczema. In this sample only one case was discovered of which there was no previous record.

Discussion

It is apparent that we are dealing with four different age-groups, but in the majority of cases of childhood eczema the disorder begins in the first year and therefore the incidence in the older group is not likely to be much greater than in the younger. This is borne out by the figures for the separate years. The sample of the population investigated is biased as regards social class, previous housing conditions, size of family, and various medical conditions; all of which might give priority to be housed on such a new estate. However it would be unlikely for such a selection to increase significantly the number of families with a tendency to eczema.

It seems probable that the figure of incidence of 3·1% is low rather than high, since all doubtful cases were rejected and, as demonstrated, there would be a few cases of eczema not recorded on the cards.

There are all degrees of severity of eczema in early childhood from mild states for which no medical advice is sought to the severe grades requiring admission to hospital. It would be very difficult to assess the incidence of minor eczematous states, which general observation would indicate to be extremely common.

Summary

An attempt has been made to assess the incidence of infantile eczema in the general population by an examination of health visitors' cards.

Out of 1024 children 32 had had infantile eczema (3·1% ± 0·56%). The true figure for the incidence may well be higher.

We should like to express our thanks to Dr. R. H. Parry for permission to carry out this work, to Miss E. H. L. Duncan for her help with the statistics, and to the health visitors concerned with the investigation.

NORTH BRITISH DERMATOLOGICAL SOCIETY.

Edinburgh, 8 December 1955.

Leuconychia.—Dr. G. A. Grant Peterkin.

A boy aged nine, who is a twin, and whose mother stated that he was born with his finger nails entirely white. There is no family history of xeroderma or the asthma-eczema syndrome. The nails remained white until September 1954, when they became normal only to revert in a short time to the original appearance.

When first seen in September 1955 all the nails were completely white except those of the little fingers, which showed some white spots. Apart from " buck " teeth, no ectodermal defect was found. Since September he has been treated with vitamin A in the form of Ro-A-Vit (Roche) 50,000 units daily and gelatin. All except two of the nails are now practically normal. His mother has been asked to stop treatment to see whether or not relapse occurs.

Creeping Eruption.—Dr. G. A. Grant Peterkin.

A girl aged 20, from Kenya, observed a linear red streak over the anterior aspect of the right ankle about the end of October 1955. She diagnosed this herself as a " sandworm ", and thought she must have contracted it in July, when she was in Mombasa and swam from a sandy beach where creeping eruption is not uncommon. The appearance was typical of creeping eruption—a slightly erythematous healed area and above it a U-shaped raised linear lesion with an erythematous border. The worm had travelled exactly one inch since she was first seen ten days before. The treatment used later was freezing with liquid nitrogen.

The following cases also were shown :

Linear Naevus ; Congenital Hyperkeratosis.—Professor G. H. Percival.

Mycosis Fungoides ; Premycotic Eruption ; Darier's Disease ; Porokeratosis (Mibelli) ; Pityriasis Rubra Pilaris.—Dr. G. A. Grant Peterkin.

Ehlers-Danlos Syndrome ; Darier's Disease ; Porokeratosis (Mibelli).—Dr. P. W. Hannay.

THE NORTH OF ENGLAND DERMATOLOGICAL SOCIETY.

Liverpool, October 1955.

Xanthoma Tuberosum.—Dr. F. Glyn-Hughes.

Case 1.—A woman school teacher aged 59.

History.—Early in 1950 and soon after the menopause a crop of very small nodules appeared on the elbows and knees. They were devoid of subjective sensation, but gradually increased in size and number. In October 1951, she was put on a low cholesterol diet, but this had no significant influence on the eruption. In January 1953 a course of methyl testosterone was begun (5 mg. *t.d.s.*). Four months later the development of hirsuties was noted on the chin together with a deepening of the voice. A regression of the lesions was observed in June 1953, and by April 1954 this had become pronounced. Her general health has remained excellent throughout.

Family History.—No diabetes in the family. Mother died suddenly at 64. Father

died at 82. Brother aged 61 has angina pectoris. Three sisters all well, and two of them have been found to have normal serum cholesterol values.

Examination.—A small nodule present on the right elbow and right knee. Normal left elbow ; little more than pigmented spots of left knee.

Investigations.—E. C. G. normal (October 1951). No glycosuria. B.P. 170/105. Serial cholesterol estimations as follows :

8.x.51	.	860 mg. per 100 ml.
22.xii.51	.	500 ,, ,, ,, ,,
24.iv.52	.	700 ,, ,, ,, ,,
14.vii.52	.	250 ,, ,, ,, ,,
6.ii.53	.	450 ,, ,, ,, ,,
4.iv.53	.	490 ,, ,, ,, ,,
30.vii.53	.	264 ,, ,, ,, ,,
24.ix.55	.	35 ,, ,, ,, ,,

Case 2.—A housewife aged 55.

History.—Groups of small red nodules appeared on the knees and elbows in March 1952. She was put on a strict diet and lost 2 stone in 12 months, but this had no effect on the lesions, which gradually enlarged. In July 1954 a course of methyl testosterone was begun (5 mg. *b.d.*) In March 1955 it was thought that the lesions were beginning to decrease in size, but there has been no striking response. General health has remained good, apart from " blackouts ", which have occurred once or twice a year since 1940, when her husband was killed in the Navy.

Family History.—Nil relevant.

Examination.—Three or four firm red tumours of varying size over each olecranon, not fixed to deep structures and devoid of tenderness. Some numerous but smaller lesions on the knees.

Investigations.—No glycosuria. B.P. 150/100. E.C.G. normal. Serial cholesterol estimations as follows :

28.iii.52	.	550 mg. per 100 ml.
2.v.52	.	310 ,, ,, ,, ,,
18.vii.52	.	250 ,, ,, ,, ,,
15.viii.52	.	340 ,, ,, ,, ,,
26.ix.52	.	179 ,, ,, ,, ,,
27.x.52	.	500 ,, ,, ,, ,,
15.xii.52	.	400 ,, ,, ,, ,,
30.i.53	.	430 ,, ,, ,, ,,
26.ii.53	.	425 ,, ,, ,, ,,
7.v.53	.	410 ,, ,, ,, ,,
27.ix.55	.	150 ,, ,, ,, ,,

Comment—These two cases show a substantial reduction in serum cholesterol after a course of methyl testosterone in moderate dosage accompanied in the former by a striking degree of clinical resolution.

Chronic Non-specific Ulceration. Dr. S. Canter.

A man aged 53.

Thirteen years ago the patient developed a group of small nodules on the upper left arm which disappeared shortly after a similar group had appeared on the right shoulder. These gradually coalesced and became scaly, being diagnosed in 1944 as psoriasis. For the past two or three years the lesions have gradually ulcerated and spread with no sign of healing on both upper arms, new lesions appearing on the shoulders. No form of treatment has to date been successful, including large doses of antibiotic, and local x-ray therapy.

On examination.—Several large granulomatous ulcers are present on the upper parts of the arms and a few smaller ones on the shoulders (Fig. 1). Some beads of pus can be expressed from the undermined edges of the ulcers.

Histology.—There is a chronic non-specific granuloma with plasma cells and foreign-body giant cells. There is a slight reactive hyperplasia at the edges of the ulcers.

Fig. 1.

Investigations.—Anaerobic and aerobic cultures of the pus yielded a coagulase positive *Staph. aureus* only.

W. R. and Khan—negative.

Blood W.B.C. normal.

The following cases also were shown :

Darier's Disease.—Dr. C. McGibbon.

Mycosis Fungoides.—Dr. J. H. S. Pettit.

CURRENT LITERATURE.

THE SIGNIFICANCE OF A POSITIVE L. E. PHENOMENON. Richard S. Weiss and Sheldon Swift. (1955) *Arch. Derm. Syph., Chicago*, **72**, 103.

The authors after a careful study of the blood picture in a variety of diseases conclude that the fully developed L.E. cell is found in lupus erythematosus alone. Other abnormalities, such as the tart cell and pre-L.E. cells, may be found in other conditions, such as penicillin sensitivity, but not the L.E. cell. An interesting and important observation recently made is the occurrence of a syndrome resembling lupus erythematosus after the use of hydrolazine for hypertension. Here true L.E. cells may be found, but when the drug is stopped the symptoms disappear though L.E. cells may persist for some months. J. K.

PIGMENTED NAEVI: A CLINICAL APPRAISAL IN THE LIGHT OF PRESENT DAY HISTOPATHOLOGICAL CONCEPTS. Bertram Shaffer. (1955) *Arch. Derm. Syph., Chicago*, **72**, 120.

The author has examined 204 pigmented naevi clinically and histologically, and divided them into (1) flat lesions, (2) slightly elevated lesions, (3) elevated lesions with pigmented halos, (4) verrucoid lesions, (5) polypoid lesions, (6) elevated dome-shaped lesions, (7) sessile lesions and (8) papillomas. The first group was composed almost wholly of junction naevi, the second and third groups largely of compound naevi, the fourth group mostly of intradermal naevi with evidence of junctional activity, while the rest were almost consistently of the intradermal variety. J. K.

AMINOPTERIN FOR PSORIASIS. Rees B. Rees, James H. Bennett and Warren L. Bostick. (1955) *Arch. Derm. Syph., Chicago*, **72**, 133.

Aminopterin was given to 171 patients with psoriasis. The dosage was conservative, 0·5 mg. by the mouth daily up to a maximum of 6 mg. in a period of 12 to 20 days. Clearing of the lesions or great improvement occurred in 80% of the patients. Slight and transitory toxic effects were produced in 8%. J. K.

VARICOSE ECZEMA AND VARICOSE ULCER. G. A. Grant Peterkin. (1955) *Practitioner*, **175**, 276.

Incompetent veins may result from raised intra-abdominal pressure or thrombophlebitis, and an inherited predisposition or accentuation by work which entails much standing may also be factors. In many cases eczema and ulceration follow the injection of superficial veins in patients whose deep veins are already inefficient. Wet dressings are applied to the eczematized areas in the initial stages and later Lassar's paste or $\frac{1}{2}$% crude coal tar in Lassar's paste may be used. In the presence of pronounced infection 3% Vioform ointment (Ciba) in Lassar's paste is advised.

Heredity, thrombophlebitis, trauma, occupation and associated arterio-vascular disease are also important factors in varicose ulceration. Treatment is complete bed rest or supportive treatment, e.g. elastic bandages, pressure pads and deep massage to the feet and ankles followed by protective pastes. In occasional cases complete surgical excision may be necessary. R. J. C.

NOCARDIASIS. H. S. Andleigh. (1955) *Antiseptic*, **52**, 525.

A general account is given of nocardial infections. They may be subcutaneous and localized or systemic, in which case the lungs are usually primarily involved, though later metastatic abscesses may appear anywhere, commonly in the brain. Subcutaneous lesions are usually seen on the feet (Madura foot) and may lead to widespread destruction involving bone, but metastases are uncommon. We are told nothing about treatment except that it is simple and inexpensive. R. D. S.

MALIGNANT MELANOMA IN JAPAN. Yoshio Yoshida. (1955) *Ind. J. Derm. Ven.*, **21**, 59.

This tumour is less frequent among Japanese than in the white races, but a higher proportion are found on the lower extremities, especially on the (non-pigmented) soles. R. D. S.

THE MANAGEMENT OF CHRONIC ECZEMA OF THE EXTERNAL EAR CANAL. Frederick Reiss. (1955) *Ind. J. Derm. Ven.*, **21**, 73.

The incorporation of antibiotics or antimicrobial agents and hydrocortisone in a buffered ointment base is recommended. Dysfunction of the ceruminous glands is of aetiological importance. R. D. S.

HYDROCORTISONE OINTMENT IN THE TREATMENT OF VERRUCA PLANA. Pran Nath Behl and Harbajan Singh. (1955) *Ind. J. Derm. Ven.*, **21**, 78.

It cures them—6 out of 9 and three probables. R. D. S.

INVESTIGATION ON BACTERIAL DESICCATION. G. Miescher, H. Lincke and P. Rinderknecht. (1955) *J. invest. Derm.*, **24**, 293.

Suspensions of microbes in water and in solutions of albumen and gelatin were smeared on surfaces of different kinds and exposed to desiccation at various temperatures and in oxygen-free vacuum.

"It is very likely that the fact of being desiccated is not the principal cause of the death of microbes but the circumstances of the desiccation process." The authors attribute the life-saving influence of vacuum to the absence of oxygen and that of albumen, etc., to mechanical factors " . . . if the microbe is adhered to a stiff and inflexible surface . . . it will be so deformed by exsiccation that it loses its viability ". (It is difficult to visualize physical events at microscopic dimensions, but surely it is possible that the rapid exhaustion of air, even at room temperature, would create conditions in the microbe very like those obtained in freeze-drying, which is, after all, a recognized method of preserving bacteria ? Again, much of the water contained in albumen and gelatin cannot be expelled without heat, though it might still be utilizable by microbes in contact with it.) J. H. T. D.

IMMUNITY TO REINFECTION FOLLOWING RECOVERY FROM CUTANEOUS LEISHMANIASIS (ORIENTAL SORE). F. Sagher, S. Verbi and A. Zuckerman. (1955) *J. invest. Derm.*, **24**, 417.

New primary lesions can be induced by superinfection as long as parasites are to be found in the primary focus. An isophasic reaction results from reinoculation in the course of relapsing leishmaniasis. An accelerated reaction corresponding to the second part of Koch's fundamental experiment is produced in patients who have recovered either from oriental sore naturally acquired or from a first attack experimentally produced. J. H. T. D.

TOXICITY STUDIES ON SELENIUM DISULPHIDE SUSPENSION. E. M. Shapiro, C. M. Pomerat and J. F. Mullins. (1955) *J. invest. Derm.*, **24**, 423.

Certain plants in the Great Plain region (S. Dakota, Wyoming and Nebraska) derive enough selenium from the soil to poison animals feeding on them. " Blind staggers ", viz. peripheral neuritis, emaciation and loss of hooves and hair are the signs.

Apart from the usual bizarre effects reported from industry, " depression dizziness and clouding of the sensorium " had been complained of by patients in whose serum from 0·005 to 0·006 mg. of selenium was found. In the case of a popular scalp lotion the drug had no more effect than the vehicle alone on tissue cultures of chicken spleen and human skin. J. H. T. D.

EFFECTS OF CALORIC RESTRICTION ON SKIN AND HAIR GROWTH IN MICE. L. A. Loewenthal and W. Montagna. (1955) *J. invest. Derm.*, **24**, 429.

When mice receive only half the food they need the activity of such follicles as may happen to be in telophase is arrested, though hairs having already begun to form continue their development albeit restricted and delayed.

On resumption of a normal diet resting follicles immediately set to work ; though a week may elapse before any activity is discernible in follicles containing more or less fully developed hair.

Glycogen is always present in the active hair follicle and also in the cells of an exhausted panniculus, though it disappears as soon as the fat is replaced. Some association between the activity of the panniculus and phases of hair growth in mice has already been reported. J. H. T. D.

LIVER BIOPSY IN SARCOIDOSIS. G. Mather, J. Dawson and C. Hoyle. (1955) *Quart. J. Med.*, n.s., **24**, 331.

Liver biopsy is a safe and reliable procedure for the diagnosis of sarcoidosis. Epithelioid-cell follicles were found in 63% of 93 patients with sarcoidosis. They were equally common in the various types of sarcoidosis. Follicles were found in 10 of 11 patients in whom erythema nodosum heralded the onset of sarcoidosis. There was no relationship between raised serum globulin levels and hepatic follicles.

Serial liver biopsies showed that disappearance of cells from the follicles is often associated with clinical improvement during treatment with cortisone, streptomycin and para-amino-salicylate. J. M. B.

ACUTE VASCULAR (SCHONLEIN-HENOCH) PURPURA—AN IMMUNOLOGIC DISEASE? M. B. Kreidberg, W. Dameshek and R. Lortorraca. (1955) *New Engl. J. Med.*, **253**, 1014.

Fifteen cases of acute vascular purpura were investigated. Biopsies were carried out on 4 and in each case there was an acute inflammatory reaction involving the capillaries. The authors consider the fundamental lesions to be vasculitis and perivasculitis, and suggest that this may be caused by an antigen-antibody reaction in the small blood vessels. The widespread nature of the disorder affecting the blood vessels and endothelial surfaces throughout the body is emphasized. A. D. P.

CUTANEOUS TORULOSIS. Yves Bureau, Henri Barrière and Rémi Trichereau. (1955) *Ann. Derm. Syph., Paris*, **82**, 481.

A case of torulosis is reported which presented as proliferating nodular lesions on the right hand without any other manifestations of the disease. A full survey of similar cases in the literature is given. The authors stress the clinical aspect, particularly the rapid appearance of the granuloma. Skin manifestations are rare, only occurring in 10% of patients. The diagnosis can only be made by finding the characteristic fungus. The patient improved on diethylstilboestrol but eventually died. F. F. H.

TREATMENT OF CHRONIC PEMPHIGUS WITH ACTH AND CORTISONE. J. J. Zoon and P. van Aken. (1955) *Ann. Derm. Syph., Paris*, **82**, 510.

The authors give their findings in 31 patients with pemphigus in the pre-cortisone days—14 dead in the first year and 22 at the end of the second. Fourteen patients were treated with steroid therapy and 5 died, 3 almost free from symptoms of pemphigus. Unfortunately the survival times are not clearly set out, but the authors believe this form of treatment much superior to those used previously. F. F. H.

CUTANEOUS XANTHOMAS WITH NOTES ON A CASE OF XANTHOMA DISSEMINATUM. Luis E. Pierini and Julio M. Borda. (1955) *Arch. argent. Derm.*, **5**, 125.

A man aged 51 had gradually been losing weight for a year, and in the last four months also had severe nasal obstruction, painful nodules in his skin and some fever. In the groins and axillae there were condylomatous-looking lesions formed by aggregations of reddish yellow papules that had become eroded. Discrete nodules were scatted over the trunk, forehead and nasolabial folds. Regional lymphatic glands were enlarged. Histological sections of a skin nodule, the swollen and highly vascular tissue in the nose, and of a lymph gland all had the characteristics of xanthomatous lesions. There were areas of rarefaction in a skiagram of the skull. The blood cholesterol level was within normal limits.

The authors discuss cutaneous xanthomas and arrange them into four groups : those associated with a raised blood cholesterol, those where the blood cholesterol is normal, those associated with hyperlipaemia, and lastly well defined dermatological conditions that may by chance become xanthomatous. G. W. B.

PUSTULAR DERMATOSES OF THE EXTREMITIES. Dagoberto O. Pierini. (1955) *Arch. argent. Derm.*, **5**, 217.

After passing in review the changing ideas about pustular acrodermatitis the author separates the various types into two main groups. The first, which he calls acrodermatitis pustulosa perstans, follows on some local injury or whitlow. The fundamental histological lesion is a pustule in the malpighian layer with a diffuse infiltration of polymorphs and an intense inflammatory reaction in the dermis. Pyogenic organisms are often recovered from the lesion.

His second group has no antecedent injury or whitlow although the initial appearance may suggest an early whitlow. Small pustules set in the horny layer rapidly dry to crusts that are constantly renewed. The lesions are sterile. This second group can be divided—where psoriasis is or has been present or may appear during the course of the illness the condition is pustular psoriasis, the remainder are pustular bacterides. G. W. B.

URTICARIA PAPULOSA AND OTHER TYPES OF MASTOCYTOSIS. R. Degos. (1955) *Actas dermosif. Madrid*, **46**, 759.

A clear and well illustrated account of the various types of mastocytic infiltration of the skin, which Degos separates into the following groups :

Urticaria pigmentosa (mastocytosis pigmentaria eruptiva).
Mastocytomas.
Nodular and papular mastocytosis, often not pigmented.
Bullous mastocytosis.
Diffuse cutaneous mastocytosis.
Cutaneo-visceral mastocytosis.

G. W. B.

STUDIES ON THE PERCUTANEOUS ABSORPTION OF FLUDROCORTISONE. Clarence S. Liverpool, James F. Hildebrand, James S. Key and Richmond W. Smith, jnr. (1955) *Arch. Derm. Syph., Chicago*, **72**, 313.

From experiments on 11 patients and 2 volunteers the authors show that systemic effects (decrease in sodium excretion, oedema and gain in weight) occur under certain circumstances due to absorption of locally applied fludrocortisone (9a-fluorohydrocortisone). They occur more readily if the drug is applied in a liquid vehicle rather than in ointment form. It is concluded that the " safe " daily topical dose is 2–6 mg. in lotion form and 5–12 mg. in an ointment base. (This appears to indicate that 20 c.c. of 0·1% lotion should be made to last for 10 days and 20 g. of 0·1% ointment half that time to be on the safe side.) J. K.

DERMATITIS HERPETIFORMIS (DUHRING) SUCCESSFULLY TREATED WITH PROMACETIN. Maurice J. Costello and Constance Millette Buncke. (1955) *Arch. Derm. Syph., Chicago*, **72**, 348.

Promacetin (acetosulphone) was used in 12 cases of dermatitis herpetiformis; 8 patients had complete remissions and 2 were partially controlled. The adult dose was 3 g. daily (1 g. *t.i.d.*). An iron preparation should be given concurrently to prevent iron deficiency anaemia. Other side effects (morbilliform or scarlatiniform rashes, mild nausea and headache) are occasionally found. (No mention is made of methaemoglobinaemia which has been the abstractor's chief trouble with sulphones.) J. K.

AN EVALUATION OF THE ETIOLOGY OF OTITIS EXTERNA WITH ADDITIONAL STUDIES. Stuart C. Way, A. Memmesheimer and Albert H. Rowe. (1955) *Arch. Derm. Syph., Chicago*, **72**, 353.

The patients referred to in this study were seen in Germany and America. The authors consider that the incidence of otitis externa is increasing and that several factors are involved ; infection (mostly bacterial, varying in type ; fungous infections are rare), allergy to the infecting organisms, to foods and pollens and sensitization to medicaments used and to other contacts such as nickel. In resistant cases " allergy studies " decrease the percentage of treatment failures. J. K.

MODERATE HYPOGLYCAEMIA IN THE TREATMENT OF ALLERGIC DERMATOSES. S. Jablonska, B. Bubnow, J. Lancucki, J. Kiesel and B. Lukasiak. (1955) *Derm. Wschr.*, **132**, 1133.

One hundred cases of allergic dermatoses were treated with insulin injections starting with 8 units and increasing daily up to 30 units. Good results were obtained in 75% of cases and improvement usually occurred after the fifth dose. Six to fourteen injections were required to bring about temporary recovery. The results were considered to be superior to those obtainable with ACTH. During the hypoglycaemic state there was a decrease in the intradermal reaction to adrenaline and histamine and after the shock there is a decrease of nerve conductivity. These inhibitory processes are sufficient to alter the reactivity of the skin to external and internal agents in the course of one to three weeks. W. G. T.

RECURRENT VARICELLIFORM ERUPTION (KAPOSI). H. Teller. (1955) *Derm. Wschr.*, **132**, 1130.

Recurrent attacks of this condition have been reported occasionally. A young man of 22, who suffered from atopic eczema, had two attacks of varicelliform eruption, proved by demonstration of the virus. Rapid recovery from each attack with antibiotics. W. G. T.

ATTEMPTED INOCULATION OF A HUMAN WART ON MONKEY SKIN. E. Hoffman. (1955) *Derm. Wschr.*, **132**, 1033.

In 1906 the author succeeded in inoculating a wart on to the skin of a monkey. As the incubation period was very short, probably as the result of impetiginous infection of the original wart, and the resulting lesions did not clearly show vacuolization of the rete cells, the attempt is is only considered to have been partially successful. W. G. T.

DERMATITIS HERPETIFORMIS : A MORPHOLOGICAL SYNDROME. U. Schultze-Frentzel. (1955) *Derm. Wschr.*, **132**, 1105.

The view that dermatitis herpetiformis is only a clinical syndrome was first expressed by Blaschko in 1889. All criteria that have ever been used in an attempt to define the condition as a disease of its own have been shown to be unreliable on critical examination of the published work. In addition dermatitis herpetiformis can change into other dermatological conditions such as erythema multiforme, eczema and pemphigus. Aetiological factors can be ascertained in a small number of cases, amongst which are ingested proteins, drugs and radiological contrast substances. The condition has also been reported in association with malignant disease. It is therefore suggested that it would be better to regard dermatitis herpetiformis as a morphological syndrome in the same way as erythema multiforme or erythema nodosum. W. G. T.

TREATMENT AND PATHOGENESIS OF TYLOTIC ECZEMA OF THE PALM. W. Höfs. (1955) *Derm. Wschr.*, **132**, 1177.

Cases were treated with either thorium X varnish or injections of $\frac{1}{2}\%$ procaine solution. Primary hyperkeratotic eczema of the palms responded well, those cases in which hyperkeratosis was the sequel of some acute manifestation responded poorly. This led to the suggestion that the pathogenesis was not comparable and that the primary type was probably the result of a vasomotor disturbance which was temporarily relieved by the hyperaemia produced by either of the agents employed. W. G. T.

TOXIC ERYTHEMA DUE TO HYDANTOIN PREPARATIONS. H. G. Piper and K. A. v. Zezschwitz. (1955) *Derm. Wschr.*, **132**, 1186.

Since first introduced in 1924 these substances have been extensively exhibited particularly in epilepsy, epanutin being one commonly used in this country. Morbilliform and scarlatiniform eruptions are common and fatal bullous eruptions have been reported on several occasions. Another fatal case of a bullous nature is added and two histories of surviving cases are given. Of these one was a bullous eruption, the other urticarial. W. G. T.

ON MICROSPORON INFECTION. H.-E. Kleine-Natrop. (1955) *Derm. Wschr.*, **132**, 1190.

At the time of the 3rd International Congress in 1896 this infection was known only in England and Western Europe. Since then it has spread all over Europe. An extensive list of publications shows the gradual spread over Germany. A number of sporadic and epidemic cases have been reported after the second war. Two forms have been noted, the classical and more common and the inflammatory. A few cases were observed in normal adults. All treatments employed, both topical and epilatory, are discussed. No treatment is considered to be altogether satisfactory and modern therapeutic developments have been disappointing. Treatment with soft x-rays has been used lately and is considered to be superior to previous epilation technique, but too few cases have been treated so far. W. G. T.

THE EFFECT OF SEASIDE CLIMATE ON ENDOGENOUS ECZEMA. J. Stein. (1955) *Derm. Wschr.*, **132**, 1201.

Favourable results of climatic treatment of eczema both in the mountains and at the seaside have been reported frequently. The choice of the right place is important however. Eleven

patients were observed in a camp on the shores of the Baltic. Meteorological observations were conducted at the same time.

Nine of the patients recovered completely, the other two improved. One case had seborrhoeic manifestations which were unaffected by climate, but improved with sea bathing. Itching was relieved very soon after arrival at the seaside. Excessive sunbathing had an unfavourable result. Change of the direction of the wind from the sea to the land side caused increase in itching, as did both increases and decreases of humidity. Sea-bathing had no effect on the eczematous manifestations. W. G. T.

THE SIGNIFICANCE OF THE POTASSIUM DICHROMATE TEST IN DERMATITIS DUE TO ALKALIS. Mudr. G. Lejhancová and J. Wolf. (1955) *Derm. Wschr.*, **132**, 1237.

The authors observed frequent dichromate positive skin tests in cases of cement dermatitis (73%). Only 2 of 22 types of cement contained traces of chromium. One hundred and forty-seven of a total of 1159 cases of occupational dermatitis gave positive skin reactions to dichromate. Of these only 26 were in contact with chromium. The others were all in contact with alkalis. It is considered that the chrome sensitivity is only an accompaniment of sensitization to alkalis, though it is probably wiser not to dismiss it as insignificant and to avoid employing persons showing such sensitivity in industries where they are exposed to chromium. W. G. T.

THE TREATMENT OF ACNE VULGARIS WITH THYMUS EXTRACT. W. Köllner and J. Stein. (1955) *Derm. Wschr.*, **132**, 1279.

Hormone therapy of acne vulgaris has been thoroughly investigated as regards all organs of internal secretion except the thymus. There is only one reference to this organ. Thymus extract had been given by mouth without effect. The authors injected this substance into 27 patients. Only two patients improved. These had signs of hypogonadism. Some of the normal subjects deteriorated. It is believed that in acne an antagonism between thymus and gonadal activity is important. When this antagonism does not exist, as before puberty, there cannot be any acne. In normal patients thymus extract can therefore only be expected to make matters worse, whereas in hypogonadal subjects thymus extract produces a state of hormonal balance similar to that existing before puberty. W. G. T.

THE TREATMENT OF CHRONIC URTICARIA WITH GERMANIN. E. Thiel. (1955) *Derm. Wschr.*, **132**, 1305.

Reports of the satisfactory results of treating cases of erythema annulare centrifugum (Darier) with germanin have led the author to try this drug in refractory cases of chronic urticaria, a condition of similar morphological appearance. In ten cases treated with 0·25 gm. once or twice weekly up to a total dose of 5 gm. suppression of symptoms was achieved, which continued in some cases longer than 6–9 months. W. G. T.

CLINICAL AND HISTOLOGICAL FEATURES OF THE SO-CALLED SELF-HEALING EPITHELIOMATA OF THE SKIN. A. Mitze. (1955) *Derm. Wschr.*, **132**, 1310.

The author reports a case of multiple tumour-like keratoses, which he considers to be identical with multiple self-healing epitheliomata, despite the absence of a family history, and a case of molluscum sebaceum. In both cases the histology was typical of a well-differentiated squamous carcinoma and the importance of correlating clinical histories with histological findings is stressed. The first case gave a history of prolonged exposure to tar and a recent exposure to intensive sunlight— factors that are considered significant. W. G. T.

GIANT URTICARIA AND ANAPHYLACTIC SHOCK AFTER EATING BRAZIL NUTS. P. G. Hesse. (1955) *Derm. Wschr.*, **132**, 1323.

The author reports his own experiences. He has a strong family history of allergic manifestations and a personal history of eczema in childhood. At the age of 15 he had a severe attack of giant urticaria with anaphylactic shock after eating a brazil nut. Later in life he had two further attacks after eating toffees, one of which was found to have contained brazil nuts. A last attack occurred after eating a cake that was later found to have been made with brazil nuts instead of almonds. W. G. T.